

Factor Quadratic Expressions of the Form $ax^2 + bx + c$

Date: _____

Notice any patterns when expanding $(2x + 3)(3x + 4)$

Is there a pattern to factor $ax^2 + bx + c$?

- STEPS** to follow:
1. Check for a common factor.
 2. Find the two numbers that add for b and multiply for a times c .
 3. Replace the middle term, bx , with these two numbers found in step 2.
 4. Common factor by grouping.
 5. Factor out the common binomial factor.

EX: Factor the following:

A. $2x^2 + 11x + 12$

B. $6m^2 + 13m - 5$

C. $18x^2 - 39x - 15$

D. $8x^2 + 2xy - 3y^2$